



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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July 14, 2015

Ms. Shannon Lozeau
DRS Power Technology, Inc.
166 Boulder Drive, Suite 201
Fitchburg, MA 01420

RE: City/Town: Fitchburg
Transmittal No. X262806
Application No.: CE-15-002
Class: *SM-50*
FMF No.: 450484
AIR QUALITY PLAN APPROVAL

Dear Ms. Lozeau:

The Massachusetts Department of Environmental Protection (“MassDEP”), Bureau of Air and Waste, has reviewed your Limited Plan Application (“Application”) listed above. This Application concerns the proposed construction of a Vacuum Pressure Impregnation process and installation of miscellaneous assembly and painting operations at your facility located at 166 Boulder Drive in Fitchburg, Massachusetts (“Facility”).

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 “Air Pollution Control” regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-O, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP’s review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator (“Permittee”) must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

A. HISTORY

On December 1, 2008 MassDEP issued Plan Approval Transmittal No. W219082 to the Permittee for a turbine test cell. The Permittee now requests this Plan Approval be terminated because the test cell is no longer being used.

On September 27, 2010 MassDEP received a 50% emissions cap notification from the Permittee for this Facility. The Permittee continues to abide by this 50% emissions cap.

B. PROJECT DESCRIPTION

The Permittee proposes to install a new special coating process, miscellaneous assembly, and miscellaneous painting operations at their site in Fitchburg, MA.

1. The coating process applies a resin or similar product to electromechanical parts and assemblies used in the manufacture of motors and power generation equipment. The process consists primarily of a custom fabricated vacuum pressure impregnation (“VPI”) tank and a curing oven as well as coating storage tanks. This process will be designated emission unit (“EU”) #1. EU #1 will have a separate exhaust stack for each of the following: the vacuum pump exhaust (serving the VPI tank and coating storage tank); the ventilation system serving the pit adjacent to the VPI tank; and the curing oven.
2. The Permittee is also relocating its Hudson, MA operations into the Fitchburg facility. The Hudson operations consist of equipment associated with metal machining and parts assembly, such as saws, lathes, drill presses, etc. This operation includes the miscellaneous use of cleaning solvent such as isopropyl alcohol. This operation will be designated EU #2.
3. The miscellaneous painting will involve rollers, brush, aerosol or spray application. A mobile spray booth may be installed for some of this painting, and its emissions will be included in the aggregate emissions from this emission unit. Specific designs have not yet been chosen, but anticipated worst-case emissions have been incorporated into this application package. The usage will be small scale touch-up and emissions will be less than one ton per year. This paint usage will be designated EU #3.

The Permittee will be installing combustion equipment associated with the curing oven. As the heat input does not trigger plan approval thresholds, details of the combustion equipment are not included in this application process. However, the Permittee will track fuel usage for the facility for the purpose of reporting emissions in accordance with 310 CMR 7.12, as applicable.

The proposed emission units will emit volatile organic compounds (VOC) and Hazardous Air Pollutants (HAP) (such as toluene and phenol) into the ambient air via point stacks (EU #1) or from general ventilation of the building (EU #2 and 3).

This Plan Approval Transmittal No. X262806 is the only 310 CMR 7.02 Plan Approval in force for this Facility as of this date. Plan Approval Transmittal No. W219082 has been terminated per the Applicant’s request. The Facility-wide 50% emissions cap submitted September 27, 2010 pursuant to 310 CMR 7.02(11) is still in force.

C. APPLICABLE REGULATORY REQUIREMENTS

1) Best Available Control Technology (BACT)

MassDEP has determined that BACT for this project is represented by the use of Best Management Practices (“BMP”) to minimize the use and emissions from VOC and HAP containing materials. These BMPs are listed in Table 6, Special Terms and Conditions.

2) Federal Regulations

The Permittee included in the Plan Application a detailed analysis of the applicability of Federal Regulations to the Facility and this project. The analysis indicated that a previously constructed fuel oil tank (not part of this project) is subject to 40 CFR 60 Subpart Kb. In addition, the analysis identified that various metal processing operations (surface coating, plating, and fabrication and finishing) that fall under this Plan Approval might become subject to 40 CFR 63 Subparts HHHHHH, WWWWWW, and XXXXXX under certain future conditions. Since MassDEP has not accepted delegation for these Subparts for sources which are not subject to 310 CMR Appendix C, the Permittee is advised to consult with EPA Region 1 at 5 Post Office Square, Suite 100, Boston, MA 02109-3912, telephone: (617)918-1111. Other applicable requirements may include notification, record keeping, and reporting requirements.

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1			
EU	Description	Design Capacity	Pollution Control Device (PCD)
1	VPI Process	6,000 cubic feet (nominal) Chamber	none
2	Miscellaneous Assembly	n/a	none
3	Paint Application	n/a	none

Table 1 Key:

EU = Emission Unit Number
 PCD = Pollution Control Device

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2			
EU	Operational / Production Limit	Air Contaminant	Emission Limit
1 (Notes 1 & 2)	None	VOC	0.24 TPY, 0.06 TPM
		HAP (single)	0.08 TPY, 0.02 TPM
		HAP (total)	0.08 TPY, 0.02 TPM
2 (Note 3)	None	VOC	2.0 TPY, 0.5 TPM
		HAP (single)	1.0 TPY, 0.25 TPM
		HAP (total)	1.0 TPY, 0.25 TPM
3 (Note 3)	None	VOC	1.0 TPY, 0.25 TPM
		HAP (single)	0.5 TPY, 0.13 TPM
		HAP (total)	0.5 TPY, 0.13 TPM
EU 1, 2, and 3	None	VOC	3.2 TPY, 0.8 TPM
		HAP (single)	1.6 TPY, 0.4 TPM
		HAP (total)	1.6 TPY, 0.4 TPM

Table 2 Key:

EU = Emission Unit Number

TPM = tons per month

HAP (single) = maximum single Hazardous Air Pollutant

TPY = tons per consecutive 12-month period

HAP (total) = total Hazardous Air Pollutants

VOC = Volatile Organic Compounds

Table 2 Notes:

Note 1: Emissions of VOC from EU 1 shall be calculated as follows:

- Pounds VOC from VPI Chamber = 9.6 pounds VOC per batch × the number of batches in the period.

- Pounds VOC from Curing Oven = Volume of coating used (gallons) × coating density × coating VOC content × 0.25.
- Pounds VOC from EU 1 = VOC from VPI Chamber + VOC from Curing Oven.

Note 2: Emissions of HAP from EU 1 shall be calculated as follows:
 HAP = Volume of coating used × coating density × coating HAP content.

Note 3: Emissions of VOC and/or HAP from products used in EU 2 and 3 shall be calculated as follows:
 Pounds [VOC or HAP] = Volume of product purchased × product density × product [VOC or HAP] content.
 The Permittee shall assume that purchase is equal to use.

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3	
EU	Monitoring and Testing Requirements
1	1. The Permittee shall monitor the number of batches of electromechanical parts and assemblies that are charged in the VPI process. 2. The Permittee shall monitor the volume, density, and VOC and HAP content of coating applied to each electromechanical parts and assemblies
2	3. The Permittee shall track through purchase records the volume, density, and VOC and HAP content of the solvent used for miscellaneous cleaning operations.
3	4. The Permittee shall track through purchase records the volume, density, and VOC and HAP content of products used for painting operations.
Facility-wide	5. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration. 6. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13

Table 3 Key:

EU = Emission Unit Number
 USEPA = United States Environmental Protection Agency
 VOC = Volatile Organic Compounds
 HAP = Hazardous Air Pollutants

Table 4

EU	Record Keeping Requirements
1	<p>1. The Permittee shall keep records of the number of batches run through the VPI process.</p> <p>2. The Permittee shall keep records of the volume of coating consumed for each batch, by noting the coating level in the storage tank prior to filling the VPI chamber and after the coating has been returned to the storage tank at the end of the batch.</p> <p>3. The Permittee shall keep records of the volume, density, and VOC and HAP content of the coating used in the VPI process.</p>
2	<p>4. The Permittee shall keep records of the purchased volume, density, and VOC and HAP content of solvents used for miscellaneous cleaning activities.</p>
3	<p>5. The Permittee shall keep records of the purchased volume, density, and VOC and HAP content of products used for painting activities.</p>
Facility-wide	<p>6. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve-month period (current month plus prior eleven months). These records shall be compiled no later than the 15th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping.</p> <p>7. The Permittee shall maintain records of monitoring and testing as required by Table 3.</p> <p>8. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) and, if applicable, PCD(s) approved herein on-site.</p> <p>9. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.</p> <p>10. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and, if applicable, PCD(s) and monitoring equipment. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates and monitoring equipment returned to compliant operation.</p> <p>11. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.</p> <p>12. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.</p> <p>13. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.</p>

Table 4 Key:

EU = Emission Unit Number
 PCD = Pollution Control Device
 SOMP = Standard Operating and Maintenance Procedure
 USEPA = United States Environmental Protection Agency
 VOC = Volatile Organic Compounds
 HAP = Hazardous Air Pollutants

Table 5	
EU	Reporting Requirements
Facility-wide	1. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a “Responsible Official” as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	2. The Permittee shall notify the Central Regional Office of MassDEP, BAW Permit Chief by telephone: 508-767-2845, email: Roseanna.Stanley@state.ma.us or fax : 508-792-7621, as soon as possible, but no later than three (3) business days after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to Permit Chief at MassDEP within ten (10) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	3. The Permittee shall report every three years to MassDEP, in accordance with 310 CMR 7.12, all information as required by the Source Registration/Emission Statement Form. The Permittee shall note therein any minor changes (under 310 CMR 7.02(2)(e), 7.03, 7.26, etc.), which did not require Plan Approval.
	4. The Permittee shall provide a copy to MassDEP of any record required to be maintained by this Plan Approval within 30 days from MassDEP’s request.
	5. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	6. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.

Table 5 Key:

EU = Emission Unit Number

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

A. The Permittee is subject to and shall comply with the Special Terms and Conditions as contained in Table 6:

Table 6	
EU	Special Terms and Conditions
1	1. If MassDEP determines that operation of EU #1 causes a condition of air pollution, then the Permittee shall take steps to mitigate the condition of air pollution, up to and including the installation of air pollution control device as appropriate.
1, 2 and 3	2. The Permittee shall use Best Management Practices ("BMP") to reduce emissions of VOC. BMP will include, but is not limited to, keeping solvent containers sealed when not in use, promoting pollution prevention, disposing of waste solvent and rags in proper closed containers, and good housekeeping measures to address spills and routine operations.

Table 6 Key:

EU = Emission Unit Number

VOC = Volatile Organic Compound

- B. The Permittee shall install and use exhaust stacks, as required in Table 7, on Emission Unit #1, that are consistent with good air pollution control engineering practice and that discharge so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as "shanty caps" and "egg beaters."
- C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (feet)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
1 (vacuum pump)	40	0.5	15-40	Ambient-150

Table 7				
EU	Stack Height Above Ground (feet)	Stack Inside Exit Dimensions (feet)	Stack Gas Exit Velocity Range (feet per second)	Stack Gas Exit Temperature Range (°F)
1 (pit ventilation)	40	1.5	15-40	Room Temperature
1 (curing oven)	40	1.5	15-40	100-300

Table 7 Key:

EU = Emission Unit Number

°F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

- A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).
- B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.
- C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.
- D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.
- E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local regulations now or in the future.

- F. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.
- G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.
- H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.
- I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.
- J. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Paul Dwiggin by telephone at 508-767-2760, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Roseanna E. Stanley
Permit Chief
Bureau of Air and Waste

Enclosure

ecc: Fitchburg Board of Health
Fitchburg Fire Department
MassDEP/Boston - Yi Tian
Paul Murphy, CAAssociates